

Notice of Allowability

Application No.

09/633,482

Examiner

D. L. Jones

Applicant(s)

ELMALEH ET AL.

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/2/04 and 6/7/04.
2. ☒ The allowed claim(s) is/are 1, 2, 5-9, 12, 13, 16, and 17.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

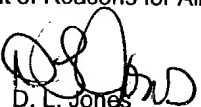
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


D. L. Jones
Primary Examiner
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ACKNOWLEDGMENTS

1. The Examiner acknowledges receipt of the amendment filed 5/2/04 wherein claims 1, 12, and 13 were amended and claims 3, 4, 10, 11, 14, 15, 18, and 19 were canceled.

Note: Claims 1, 2, 5-9, 12, 13, 16 and 17 are pending.

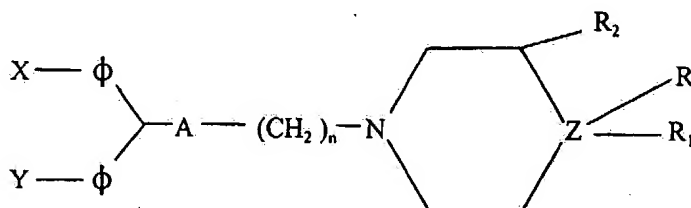
EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Paul Cook on 6/7/04.

The application has been amended as follows. Please replace all prior claim listings with the following listing.

Claim 1 (amended). A piperidine dopamine, norepinephrine, or serotonin ligand having the formula:



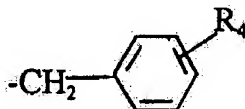
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wherein:

A is oxygen or nitrogen; n is an integer of 2 to 6; X and Y are the same or different and are hydrogen, halogen, nitro, alkyl, or halalkyl; Z is carbon or nitrogen; and Φ is phenyl or naphthyl;

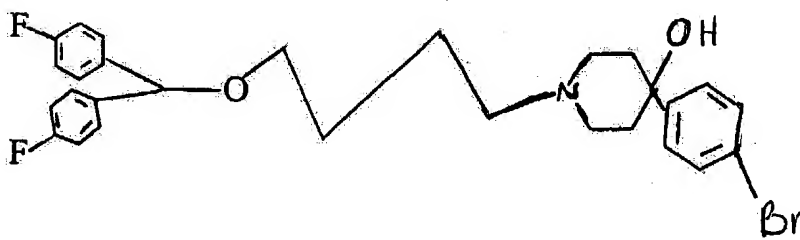
R is hydrogen, cyano, hydroxyl, $-\text{COOCH}_3$, $-\text{CH}_2\text{OH}$, or $-\text{COOH}$; R1 is 4-fluorophenyl, 4-chlorophenyl, 4-trifluoromethyl-3-chlorophenyl, 4-bromophenyl, 4-(2-keto-1-benzimidazoliny) or 1-phenyl 1,3,8-triaspiro[4,5] decan-4-one

R2 is hydrogen or



wherein R4 is halo, alkyl, cyano, nitro, alkynyl, or alkenyl.

Claim 2 (original). A compound of the formula:



Claim 3 (canceled).

Claim 4 (canceled).

Claim 5 (previously presented). The compound of any one of claims 1 or 2 which is labeled with a radionuclide.

Claim 6 (original). The compound of claim 5 wherein said radionuclide is $^{99\text{m}}\text{Tc}$.

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Claim 7 (original). The compound of claim 5 wherein said radionuclide is an iodine isotope.

Claim 8 (original). The method for imaging dopamine neurons in a mammal which comprises:

administering to the mammal an imaging dose of the compound of claim 1 labeled with a radionuclide and
detecting binding of the compound in the mammal.

Claim 9 (original). The method for imaging dopamine neurons in a mammal which comprises:

administering to the mammal an imaging dose of the compound of claim 2 labeled with a radionuclide and
detecting binding of the compound in the mammal.

Claim 10 (canceled).

Claim 11 (canceled).

Claim 12 (previously amended). The method for treating a mammal afflicted with cocaine abuse which comprises:

administering to the mammal an imaging dose of the compound of claim 1 labeled with a radionuclide and
detecting binding of the compound in the mammal.

Claim 13 (previously amended). The method for treating a mammal afflicted with cocaine abuse which comprises:

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administering to the mammal an imaging dose of the compound of claim 2
labeled with a radionuclide and
detecting binding of the compound in the mammal.

Claim 14 (canceled).

Claim 15 (canceled).

Claim 16 (amended). The method of treating a mammal afflicted with a
neurodegenerated disease characterized by a degeneration of serotonin neurons
wherein the disease is selected from Parkinson's disease, brain aging,

ALLOWABLE CLAIMS

3. Claims 1, 2, 5-9, 12, 13, 16, and 17 are allowable over the prior art of record for reasons of record in the office action mailed 2/12/04.

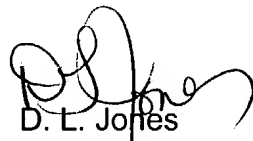
4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (571) 272-0617. The examiner can normally be reached on Mon.-Fri., 6:45 a.m. - 3:15 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D. L. Jones
Primary Examiner
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June 7, 2004